



Microcomputer Systems

imm8-88 Conversion Kit

The imm8-88 conversion kit provides an upgrade path for Intellect® 8/MOD 8 microcomputer development systems. It includes all the hardware and software products required to fully support 8080 CPU based microcomputer system development.

With the imm8-88 conversion kit installed in an Intellect 8/MOD 8, complete 8080 CPU hardware and software development capability is provided. The 8080 CPU module (imm8-83) has 78 basic instructions, six 8-bit working registers, an 8-bit accumulator, an 8-bit bidirectional data bus, and a 16-bit memory address bus which enables direct access to 64k words of memory. Control circuits for memory and input/output interface are also provided.

The new front panel control board enables access to several functions including a programmable 8-bit output

port display, stack and interrupt disable indication, and full 16-bit memory address display which are not implemented on the Intellect 8/MOD 8 front panel.

Enhanced monitor capabilities include provisions to set software breakpoints and the ability to interrogate and modify CPU registers.

The conversion kit is installed by simply plugging in the three new hardware modules in the appropriate Intellect 8/MOD 8 chassis connectors and installing the new system monitor. The system can be quickly reconfigured to support 8008 CPU chip development by replacing the original boards and system monitor.

Upgrades Intellect 8/MOD 8 microcomputer development system to support complete MCS-80 microcomputer set development.

Provides all Intellect 8/MOD 80 basic and expansion capabilities.

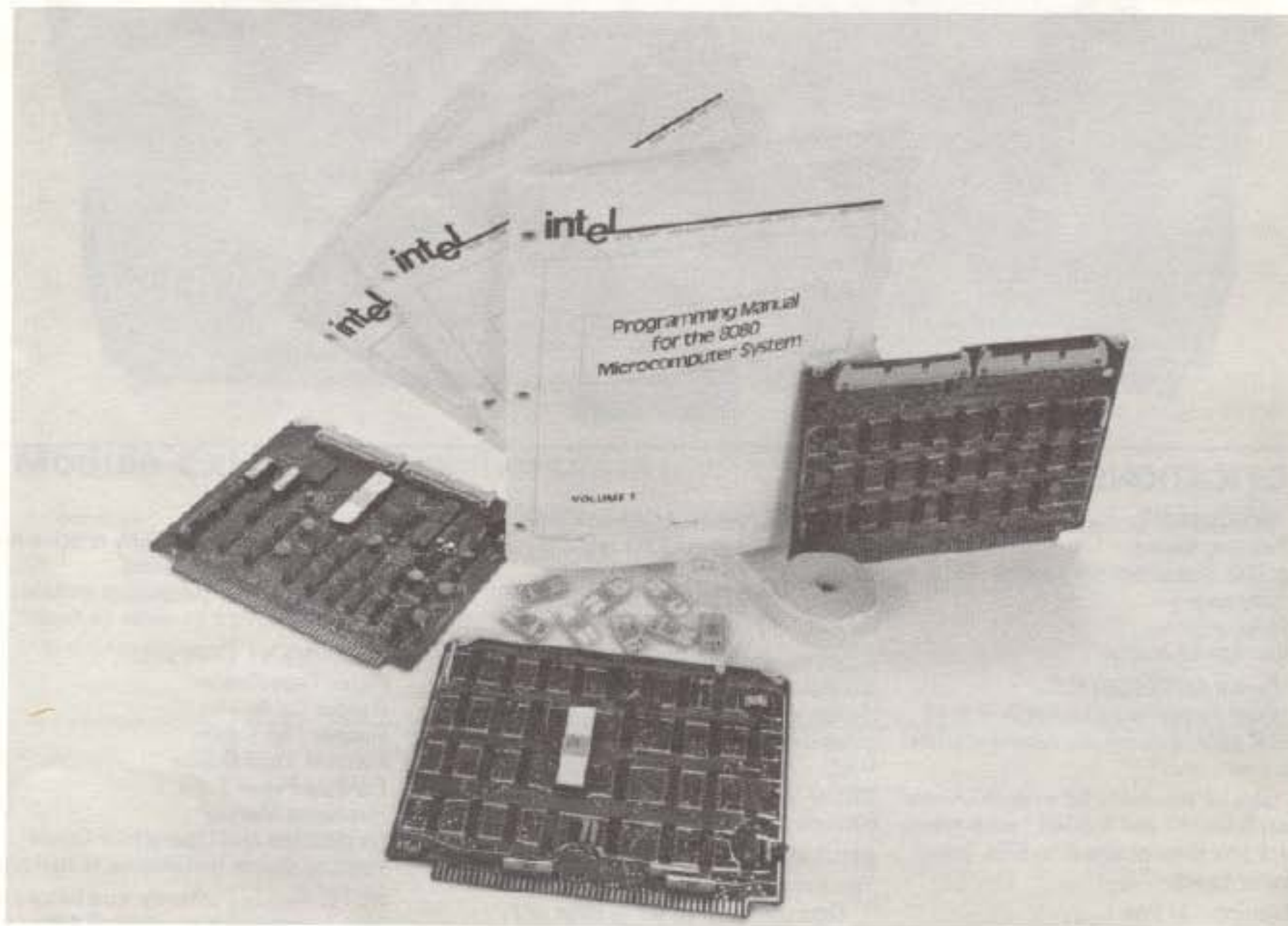
Compatible with Intellect 8/MOD 80 RAM and PROM* memory modules.

Hardware Products Include:
imm8-83 CPU Module
imm8-61 I/O Module
Front Panel Control Module

Software Products Include:
PROM Resident System Monitor
RAM Resident Macro Assembler
RAM Resident Text Editor

Documentation includes:
Operator's Manual
Hardware Reference Manual
8080 Assembly Language
Programming Manual

*Standard 1702A PROM chips must be used.



imm8-88 Conversion Kit

SPECIFICATIONS

WORD SIZE

Data: 8 bits

Instruction: 8, 16, or 24 bits

MEMORY SIZE

10k bytes expandable to 16k bytes within system chassis, 64k bytes in external user designed enclosures.

INSTRUCTION SET:

78, including conditional branching, binary arithmetic, logical, register-to-register and input/output memory reference with four addressing modes.

MACHINE CYCLE TIME

2.5 μ s

SYSTEM CLOCK

Crystal controlled at 2 MHz \pm 0.01%

I/O CHANNELS

Maximum Input/Output configuration available with I/O or Output Modules.

	Input Ports	Output Ports
imm8-61	16	16
imm8-63 (with one imm8-61)	4	28

INTERRUPT

Standard via control console. User designed multiple level interrupt capability available.

DIRECT MEMORY ACCESS

Standard via control console. User designed DMA capability available.

MEMORY ACCESS TIME

1 μ s with standard memory modules. Faster access time available with user designed memory systems.

PHYSICAL CHARACTERISTICS

Intellec 8/MOD 80: 7" x 17 1/8" x 12 1/4" (table top only)

Bare Bones 80: 6 3/4" x 17" x 21"

(suitable for mounting in standard

RETMA 7" x 10" panel space)

Weight: 30 lb (13.61 kg)

ELECTRICAL CHARACTERISTICS

DC Power Supplies:

$V_{CC} = 5V$, $I_{CC} = 12A^*$

$V_{DD} = -9V$, $I_{DD} = 1.8A^*$

$V_{GG} = +12V$, $I_{GG} = 0.06A$

DO Power Requirement:

$V_{CC} = 5V \pm 5\%$,

$I_{CC} = 11A$ max., 6A typ.

$V_{DD} = -9V \pm 5\%$,

$I_{DD} = 1A$ max., 0.5A typ.

$V_{CC} = +12V \pm 5\%$,

$I_{GG} = 0.00A$ max., 0.04A typ.

AC Power Requirement:

50-60 Hz, 115/230 VAC, 200 Watts

*Larger power supplies may be required for expanded systems.

ENVIRONMENTAL CHARACTERISTICS

Operating Temperature: 0°C to 55°C

OPTIONAL MODULES

Available for the Intellec 8/MOD80 and Bare Bones 80:

imm8-61 I/O Module

imm8-63 Output Module

imm6-28 RAM Memory Module

imm6-70: Universal Prototype Module

imm6-72: Module Extender

imm6-36: Drawer Slides and Extenders for Rack Mounting

EQUIPMENT SUPPLIED:

Central Processor Module

Input/Output Module

Front Panel Control Module

PROM Resident System Monitor

RAM Resident Macro-Assembler

RAM Resident Text Editor

Complete Hardware and Software

Documentation including schematics and assembly drawings.